



UNITED STATES DEPARTMENT OF COMMERCE

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/342,768

06/29/99

DOYLE

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17286

WM02/0425

THE WHITAKER CORPORATION
4550 NEW LINDEN HILL ROAD
SUITE 450
WILMINGTON DE 19808

EXAMINER

NGUYEN, T

ART UNIT

PAPER NUMBER

2684

DATE MAILED:

04/25/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/342,768

Applicant(s)
Doyle et al.

Examiner
Thuan Nguyen

Art Unit
2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2 20) ☐ Other:

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DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities: on line 7 of claim 1, the word "the radiationg" should either be corrected as "radiating" or "radiation" instead.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson et al. (U.S. Patent 5,949,769) in view of Yamasa et al (U.S. Patent 5,936,591) and Wickman (U.S. Patent No. 6,047,177).

Regarding claim 1, Davidson et al (or "Davidson" hereinafter) discloses a local multipoint distribution service system having an antenna for transmitting a signal of reused frequency within a specified range from the antenna (Davidson, col. 2/line 58-col. 3/line 3; and col. 3/lines 52-65).

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Davidson might not clearly disclose “the antenna having multiple radiating antenna elements, each of the antenna elements being adjusted in phase and in amplitude of radiated signal across the radiating elements to mitigate radiation above the horizon, and each of the antenna elements being adjusted in phase and in amplitude of radiated signal therefrom to decrease attenuation in radiated power with distance from the antenna”; however, such a technique of adjusting power level by adjusting each of the antenna elements of an antenna is taught by Yamasa et al (see Yamasa, Fig. 7 and col. 6/lines 38-52) and adjusting the power level by using an attenuator by Wickman (see Wickman, Fig. 3/item 36 for an attenuator and col. 6/lines 10-18). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Davidson’s LMDS system with Yamasa’s detailed technique in adjusting each of antenna elements in phase and amplitude and Wickman’s attenuator in LMDS system in order to ensure the power level, for example, decreasing the attenuation if any, is well maintained between the transmitting/or receiving antennas and receiving/or transmitting devices as preferred.

As for claim 2, in further view of claim 1 above, Yamasa and Wickman further suggests the step of “each of the antenna elements being adjusted in phase and amplitude of signal across the antenna elements to mitigate nulls between lobes of combined radiated signals collectively from the antenna elements”, i.e., the maximum and minimum power level is maintained (Yamasa, col. 7/lines 22-34; and Wickman, col. 6/lines 10-18 for attenuating the power at the output as desired).

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With respect to claim 3, in further view of claim 1 above, Yamasa and Wickman further reveals "each of the antenna elements being adjusted in phase and in amplitude of signal across the antenna elements to reduce excess signal power at near range", i.e., a predetermined level of power output is maintained to avoid excess signal power (Yamasa, col. 6/lines 38-52) and correct output power level is produced with the use of an attenuator (see Wickman, col. 7/lines 25-42).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

McCallister (US Patent 5,818,832) discloses rapid synchronization for communication systems.

Ibanez-Meier et al. (US Patent 5,949,766) disclose ground device for communicating with an elevated communication hub.

Ramasasthy (US Patent 5,991,345) discloses method and apparatus for diversity enhancement using pseudo-multipath signals.

Martek (US Patent 5,872,547) discloses conical omni-directional coverage multibeam antenna with parasitic elements.

Smith et al. (US Patent 6,104,935) disclose downlink beam forming architecture for heavily overlapped beam configuration.

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5. **Any response to this action should be mailed to:**
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 308-6306 or (703) 308-6296, (for formal communications intended for entry)



Or:

(703) 308-5403, (for informal or draft communications, please label "PROPOSED" or "DRAFT")

*Hand-delivered responses should be brought to Crystal Park II,
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (703) 308-5860. The examiner can normally be reached on Monday-Friday from 9:00 AM to 6:00 PM, with alternate Fridays off.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-4700.


THANH CONG LE
PRIMARY EXAMINER


Tony T. Nguyen
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April 17, 2001